

NUTRIENTS

MURDER
UNDER THE
MICROSCOPE

These activities will give you and your group some valuable information which might help you when solving the crime.



Look for and collect articles relating to nutrients in water. These might show how widespread and serious nutrient issues can be.

Make a list of the kinds of workers who are involved with growing plants.

If possible, talk to one of these people about what they do to help their plants grow bigger and stronger. Do they add something to the soil? If so, what?

Where do nutrients come from?





Look at the pictures on the following page. Talk with your group about them.

Could any of these places be a source of nutrients?

Choose one of these pictures and describe in writing how the activity in the picture can affect the nutrient levels in our waterways.

Hint

Talk to the group who are exploring run-off!

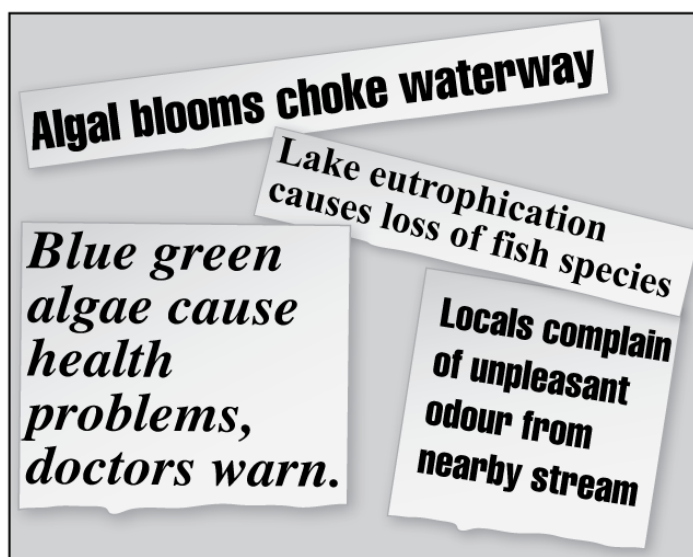


What are nutrients?



Using the internet, newspapers and other sources of information find the answers to these questions:

1. What is a nutrient?
2. Are all chemicals nutrients?
3. Which chemicals can be nutrients? Find out some of their chemical names.
4. So nutrients make things grow. What's the problem?
5. Find out what 'eutrophication' means.
6. What are some of the problems eutrophication causes? What are cyanobacteria?



These links may be helpful:

http://www.ipswich.qld.gov.au/documents/environment/activity_sheet_3b_vegetation_and_habitat_health_erosion.pdf

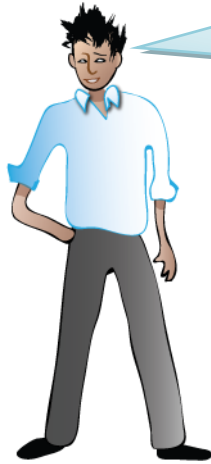
http://www.ipswich.qld.gov.au/documents/environment/activity_sheet_4_land_uses_within_catchments.pdf

Find out about waterways in Australia where excess nutrients have created problems. Collect some pictures of the damaged waterways.

Activity: The nutrient game

Design and make a board game titled 'True or False'. The game must draw players' attention to the problems created by nutrients in the waterways.

Before you begin, consider these situations. What would your answer be to these questions?



We do the right thing in our family. We don't throw our rubbish in the river. It goes to the tip. How can our garbage possibly add to nutrient levels?

I'm very careful to spray the fertilisers I use only onto the crops. I don't let it spray in the river. We are so careful every year when we do it. How could we possibly be adding to the nutrients in the river?



One little bit of dog poo won't make a difference to the environment. How could I possibly be adding to the nutrient level?



Hey, I only wash my car once a week and I do it in the street where it washes the gutters clean. How could I be adding to the nutrient levels?



Sharing information



What have you found out that might help you understand the crime? Share this information with the other groups.

- You will need to explain how nutrients get into the waterways and the effect this has.
- Get some of the class members to play your game.

OR

- Make up a role play for each of the situations in the previous activity.

These additional links may be useful:

<http://www.nrw.qld.gov.au/factsheets/pdf/land/l1.pdf>

<http://www.nrw.qld.gov.au/factsheets/pdf/water/w3.pdf>

<http://www.epa.vic.gov.au/water/threats/nutrients.asp>

http://www.anra.gov.au/topics/water/pubs/summary_reports/water_resources/pubs/water-summary.pdf